DESIGN FLOW

2 TRAINS

MAXIMUM MONTH (MMF) = 0.195 MGDPEAK DAY FLOW = 0.3 MGD

> PEAK HOUR = 0.59 MGDAVERAGE ANNUAL = 0.15 MGD

4 TRAINS MAXIMUM MONTH (MMF) = 0.39 MGD(FUTURE)

PEAK DAY FLOW = 0.6 MGD PEAK HOUR = 1.15 MGD AVERAGE ANNUAL = 0.30 MGD

(MBR TRAIN 3 & 4 TANKS TO SERVE AS EQUALIZATION TANK FOR PHASE 1)

DESIGN LOAD (MAXIMUM MONTH FLOW)

2 TRAINS BOD = 1,000 LBS/DAY

TSS = 1,000 LBS/DAYTKN = 135 LBS/DAY

4 TRAINS BOD = 2,000 LBS/DAY(FUTURE) TSS = 2,000 LBS/DAY

TKN = 270 LBS/DAY

FLOW MEASUREMENT

INFLUENT

TYPE PARSHALL FLUME

SIZE 3 INCH

EFFLUENT

TYPE MAG METER (3 DUTY)

SIZE 4 INCH

DRUM SCREEN W/ INTEGRATED WASHER COMPACTOR

2 MM PERFORATED, IN CHANNEL 2 (1 DUTY, 1 STANDBY)

NUMBER CAPACITY (EA) 1.5 MGD

GRIT REMOVAL - PHASE 2 INSTALLATION

FUTURE

TYPE VORTEX GRIT TANK CAPACITY 1.5 MGD

DIAMETER 7 FEET 95% > 50 MESH REMOVAL

85% > 70 MESH 65% > 100 MESH

GRIT PUMP SELF PRIMING

CAPACITY 220 GPM @ 25 FT.

PROPELLER TYPE MIXER

GRIT CLASSIFIER – PHASE 2 INSTALLATION

FUTURE

VORTEX W/INCLINED SCREW TYPE NUMBER

54 CU FT/HR CAPACITY

INFLUENT PUMP STATION

SUBMERSIBLE SEWAGE TYPE NUMBER 3 (2 DUTY, 1 FUTURE)

CAPACITY (EA) 410 GPM @ 25 FT

EQUALIZATION TANK

NUMBER VOLUME

10,600 FT³ SIDE WATER DEPTH

15 FEET

ANOXIC TANKS

NUMBER 4 (TWO WITH EQUIPMENT)

VOLUME (EA) 4.371 FT³ SIDE WATER DEPTH 12 FEET MLSS CONCEN. 9,429 MG/L MIXERS

NUMBER HP (EA) 2.3 FEED FORWARD PUMPS

2/1 (2 DUTY, 1 STANDBY) NUMBER 474 ĠPM CAPACITY (EA)

HP (EA)

AERATION TANKS

NUMBER 4 (TWO WITH EQUIPMENT) 4,437 FT³ VOLUME (EA) SIDE WATER DEPTH

15 FEET MLSS CONCEN. 9,429 MG/L MIXERS

BLOWERS NUMBER 3 (2 DUTY, 1 STANDBY)

489 SCFM

CAPACITY (EA) HP (EA) 30

MEMBRANE TANKS

4 (2 WITH MEMBRANES) NUMBER

3,3³0 FT³ VOLUME (EA) SIDE WATER DEPTH 14 FEET 11,010 MG/L MLSS CONCEN. 4/TANK CASSETTES

MBR BLOWERS

NUMBER 455 SCFM CAPACITY (EA) HP (EA) 20

PERMEATE PUMPS

NUMBER 3 (2 DUTY, 1 STANDBY) CAPACITY (EA) 227 GPM

HP (EA)

ALKALINITY CHEMICAL SYSTEM

ALKALINITY SYSTEM DRUM SIZE

55 GAL INJECTOR CAPACITY 50 GPM MAGNESIUM HYDROXIDE

DRUM SIZE 55 GAL PUMP CAPACITY 7.5 GPH

SOLIDS STORAGE TANK

NUMBER 5,400 FT³ VOLUME SIDE WATER DEPTH 15 15,000 MG/L

SLUDGE CONCEN. DETENTION TIME AT ADF PHASE 1 9.6 DAY SOLIDS PRODUCTION

AT ADF 462 LBS/DAY OR 5,031 GPD BLOWER NUMBER

10

WAS PUMPS

NUMBER 1 (1 DUTY) 150 GPM @ 20 FT **CAPACITY**

WAS LOADING PUMPS

NUMBER 2 (1 DUTY, 1 FUTURE) CAPACITY 200 GPM @ 25 FT

STANDBY GENERATOR

NUMBER 650 KW CAPACITY POWER FACTOR 0.8

UV DISINFECTION

MEDIUM PRESSURE ENCLOSED TYPE NUMBER 1 TRAIN/ 2 BANKS LAMPS/UNIT

KW / LAMP 65% UV TRANSMITTANCE 0.25 UV CIRCULATION PUMP HP

WHEN ONE UV UNIT IS NOT WORKING, SODIUM HYPOCHLORITE IS THE PRIMARY DISINFECTION.

REUSE WATER PUMPS

NUMBER CAPACITY (EA) 40 GPM @ 200'

SODIUM HYPOCHLORITE DISINFECTION SYSTEM

HP (EA)

FEED PUMPS NUMBER CAPACITY 20 GPD

DAY TANK 30 GAL

RECLAIMED WATER TANK

150,000 GALLONS VOLUME DIAMETER 30 FT

ODOR CONTROL SYSTEM HEADWORKS (FUTURE)

SIDE WATER DEPTH

TYPE DRY PACKED MEDIA 138"L x 60"W x 88"H SIZE 2,000 CFM CAPACITY 48 INCHES CARBON MEDIA DEPTH 12 INCHES PERMAGANTE DEPTH

260 GALLONS

30 FT

NO. OF FANS HP (EA) AIR EXCHANGES PROVIDED PER HOUR 8

WELL INJECTION PUMPS

NUMBER 370 GPM CAPACITY TOTAL HP (EA) 7.5 HYDRO PNEUMATIC TANK

NUMBER VOLUME (EA)

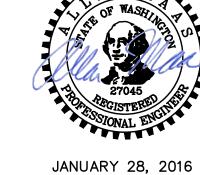
INJECTION WELLS

NUMBER 140' (VARIES) DEPTH

DESIGNED

A. MAAS REVISIONS DATE DRAWN K. TAYLOR M. OLLIVANT APPROVED **B. BUNKER**

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY P\$7367002G-3 JOB No. 216-7367-002 `'JANUARY 2016





PROJECT NAME

WATER RECLAMATION PLANT

COWLITZ RESERVATION DEVELOPMENT

DESIGN CRITERIA AND DATA

3 OF 176

G3

DRAWING NO.